

The Development of Liberal Arts and Sciences

二〇 二〇〇

—— 二〇二〇年二月二日 [1]

テクノロジカル・シグナリティ Technological Singularity テクノロジカル・シグナリティ

テクノロジカル・シグナリティ [2] テクノロジカル・シグナリティ

テクノロジカル・シグナリティ

テクノロジカル・シグナリティ

Leukotomy リーカトミー [3] リーカトミー

In Math We Trust テクノロジカル・シグナリティ AlphaGo Zero リーカトミー

リーカトミー

リーカトミー

リーカトミー

リーカトミー

リーカトミー

リーカトミー

リーカトミー

リーカトミー [5] リーカトミー

ابن حیثام Ibn al-Haytham

A row of 12 empty square boxes for writing names.

13 14

□□□□□□□□□□

15-16 15-16 well-controlled (Filippo Brunelleschi) 15-16

10 of 10

【10】
【11】
【12】

peer review

well-controlled

metaphysics

epistemology

critique

18

【16】

epistemology

critique

epistemology

critique

epistemology

1819

Ferdinand Karl Schweikart 1830

“”

A horizontal row of 15 empty square boxes, intended for children to draw or write in.

20

20

leukotomy Forrest Gump A City upon a Hill [24]

personality intelligence

“**我**”
[25]

〔26〕

leukotomy

卡爾·波普爾(Karl Popper)批判了傳統的科學觀點，認為科學不是一個確定性知識的累積過程，而是一個不斷試錯、不斷修正的過程。

Algorithmic complexity

Turing Test AlphaGo Zero datasets

Turing Machine

Universal approximation theorem

Technological Singularity

AI: A Modern Approach Wind Tunnel approach

SAE level 5

SAE level 4

SAE level 4

AlphaGo Zero Nature superhuman Superhuman generic human generic generic superhuman AlphaGo Zero

Occam's Razor

三

自利基因 (或不朽基因) The Selfish Gene (or The Immortal Gene) [28]

_____“_____” leukotomy _____

Gu Test A Progressive Measurement Of Generic Artificial Intelligence

guideline judgement“” [30]

ANSWER

智能手机 smartphone 由 CPU 运行操作系统 (OS) 软件驱动。

2018 ປີ ລົງທະບຽນ ຖະແຫຼງເກີດໃຫຍ່ Google/Waymo ປີ ລົງທະບຽນ ຖະແຫຼງເກີດໃຫຍ່
ເກີດໃຫຍ່ smartphone ປີ ລົງທະບຽນ ຖະແຫຼງເກີດໃຫຍ່ 5G ປີ ລົງທະບຽນ
ເກີດໃຫຍ່

smartphone 80[31] smartphone smartphone infrastructure

80[32] smartphone Internet smartphone smartphone PC Internet smartphone

iPhone smartphone mainframe PC smartphone

consolidation smartphone Consolidation smartphone

smartphone smartphone

smartphone

smartphone

smartphone

greedy [33]

smartphone

Matrix

motif motif motif

[34]

Hawthorne effect

smartphone

smartphone

三

individualism The Selfish Gene (The Immortal Gene)

工业化和城市化
Gilded Age

35 Gilded Age 911

金粉时代 Gilded Age 一座城市的崛起 A City upon a Hill 为自由而战 Forrest Gump 911 911

工业化和城市化 Gilded Age

“**中華人民共和國**”“**中國人民民主專政**”

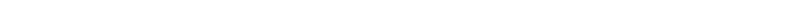
personality dimension [36]

[38]

1/5

100

11. *Leucosia* (Leucosia) *leucosia* (Linnaeus, 1758) (Fig. 11)

BRAIN Initiative 

~~~~~  
~~~~~

~~~~~ Technological Singularity ~~~~~

~~~~~

~~~~~

~~~~~

[1] ~~~~~

[2] ~~~~~

[3] ~~~~~

~~~~~

~~~~~

[4] ~~~~~ Chinese room ~~~~~

~~~~~ In Math We Trust ~~~~~

~~~~~ Technological Singularity ~~~~~

[5] ~~~~~

~~~~~

[6] ~~~~~ guideline ~ judgement ~~~~~

[7] ~~~~~

“~~~~~”~~~~~

[8] JOHN PHILOPONUS John Philoponus was a Greek Christian philosopher and theologian.

Ibn al-Haytham was a Persian polymath who made significant contributions to optics, mathematics, and methodology.

[9] architect architect methodology

[10] personality

personality

[11] personality personality

personality

personality personality

physical sciences

[12] 1630

1632

[13] 1687

[14]

[15] Gödel's theorems suggest metaphysics from humans may not work. I do not cross the boundary between religion and science.

Je pense, donc je suis

[16] 20

insights

17. Ferdinand Karl Schweikart

18. [19]

19. [20]

20. [21]

21. [22]

22. [23]

23. [24]

24. [25]

25. [26]

26. [27]

27. Filippo Marinetti Manifesto del Futurismo

Technological Singularity

Nature

AlphaGo Zero

superhuman

go rogue

rogue

1917

1917

1917

personality

1917

1917

## ANSWER

## ANSWER

[24] 

“”

5 of 5

attraction|passion|commitment

leukotomy BRAIN Initiative

ARBEIT MACHT FREI

[27] 

[29] 

go rogue □ vandalist □ 1204

Socratic method

A row of 15 empty square boxes for drawing.

AlphaGo Zero 通过自我对弈仅用 40 天就达到了人类围棋水平，相关研究发表在《自然》(Nature) 上，题为“AlphaGo Zero reaches superhuman performance without human knowledge”。

Jack Ralph Ralph Ralph  
leader Piggy Ralph Ralph  
Simon

The Development of Liberal Arts and Sciences

[31] 5G 未来移动通信技术与应用，北京：电子工业出版社，2019。  
[32] Google/Waymo 未来基础设施，北京：电子工业出版社，2019。

Demis Hassabis დამის ჰასაბის neuroscience ნერვული სისტემის უსამართო მეცნიერება human specific intelligence უსამართო მეცნიერება

[32] Intel CPU چیزی است که CPU و OS را می‌سازد.

CPU ဗုံး OS ပုံမှန် 1980 ခုနှစ်

Intel smartphone CPU Technological Singularity

CPU և OS սահմանափակություններ smartphone ու CPU սկզբան Intel և  
ARM սկզբան ARM սահմանափակություններ Intel սկզբան Google և Android OS և  
open source սահմանափակություններ CPU և OS սահմանափակություններ

Линус Торвалдс Linux Google Android Microsoft Apple smartphone Google Google CPU OS ARM Google CPU OS smartphone

smartphone

[33] 

A decorative horizontal bar consisting of a series of small, evenly spaced rectangular blocks, likely made of wood or a similar material, arranged in a straight line.

A decorative horizontal bar consisting of a series of small, evenly spaced rectangular blocks, likely made of wood or a similar material, arranged in a single row.

[34] 〔プログラム音楽〕 program music 〔プログラム音楽〕 program music “”

[35] "On 28 July, after reading Serbia's reply, Wilhelm commented, 'But that eliminates any reason for war'[132] or 'every cause for war falls to the ground'. [133].....Wilhelm's sudden change of mind about war enraged Bethmann Hollweg, the military, and the diplomatic service, who proceeded to sabotage Wilhelm's offer.[135]", from [https://en.wikipedia.org/wiki/July\\_Crisis](https://en.wikipedia.org/wiki/July_Crisis).

[36] 

[37] 

[39] Leukotomy ლეიკოთომი Moniz მონიზი leukotomy ლეიკოთომი  
ლეიკოთომი ლეიკოთომი ლეიკოთომი Leukotomy ლეიკოთომი leukotomy ლეიკოთომი  
ლეიკოთომი leukotomy ლეიკოთომი Moniz მონიზი leukotomy ლეიკოთომი  
<https://www.nobelprize.org/prizes/medicine/1949/moniz/article/>, First published 29  
October 1998

Moniz 被授予了1949年的诺贝尔医学奖，"for his discovery of the therapeutic value of leucotomy in certain psychoses." 他的研究论文可以在 <https://www.nobelprize.org/prizes/medicine/1949/moniz/biographical/> 上找到。

leucotomy

leukotomy 『脳の<sup>を</sup>切り<sup>る</sup>手<sup>段</sup>』 “脳”の<sup>を</sup>切り<sup>る</sup>手<sup>段</sup>